

Serial No.: 09/413,012
Docket No.: R0052CON
Amendment Dated June 23, 2005
Responsive to the Office Action dated May 18, 2005

Amendments to the Claims:

A complete listing of all claims is presented below.

5 1-33. (Canceled).

34. (New) A tissue dissector, comprising:

an elongated cannula having a proximal end and a distal end;

10 a distal tip having tapered outer walls converging to a blunt end for dissecting
tissue, the tip being disposed on the distal end of the cannula to dissect tissue and facilitate
passage of the cannula through tissue;

a locking mechanism positioned on the cannula proximal to the distal tip; and

15 a dilating element disposed on the cannula proximal to the distal tip, the dilating
element having a smooth exterior contour to facilitate atraumatic expansion of tissue
following dissection by the tapered distal tip, the dilating element having a cross-sectional
dimension greater than the cross-sectional dimension of the distal end of the cannula and
greater than the cross-sectional dimension of the distal tip, the dilating element further
comprising a mating lock adapted to mate with the locking mechanism on the cannula for
removably positioning the dilating element on the cannula.

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35. (New) The tissue dissector of claim 34, wherein the locking mechanism comprises
a length of screw threads positioned on an outer surface of the cannula, and the mating lock
comprises a threaded bore hole formed in the dilating element for engaging the length of screw
threads.

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36. (New) The tissue dissector of claim 34, wherein the locking mechanism comprises at least one protruberance positioned on an outer surface of the cannula, and the mating lock comprises a mating slot formed in the dilating element for engaging the protruberance.

5 37. (New) The tissue dissector of claim 34, further including an endoscope sized to fit within a lumen of the cannula, wherein the distal tip is transparent to allow tissue being dissected to be visualized with the endoscope through the distal tip.

10 38. (New) The tissue dissector of claim 34, further including a spacer length of cannula of between 14-28 mm disposed between a distal end of the dilating element and a proximal end of the distal tip.

15 39. (New) The tissue dissector of claim 34, wherein the cross-sectional dimension of the dilating element is at least two times larger than the cross-section sectional dimension of the distal end of the cannula.

40. (New) The tissue dissector of claim 39, wherein the cross-sectional dimension of the dilating element is between 15-30 mm.

20 41. (New) The tissue dissector of claim 34, wherein the exterior contour of the dilating element is an oval-shape.

42. (New) The tissue dissector of claim 34, wherein the dilating element is compressible.

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43. (New) A tissue dissector kit, comprising:
an elongated cannula having a proximal end and a distal end;

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a distal tip having tapered outer walls converging to a blunt end for dissecting tissue, the tip being disposed on the distal end of the cannula to dissect tissue and facilitate passage of the cannula through tissue;

a locking mechanism positioned on the cannula proximal to the distal tip; and

5 a plurality of dilating elements each adapted to mount on the cannula proximal to the distal tip, each dilating element having a smooth exterior contour to facilitate atraumatic expansion of tissue following dissection by the tapered distal tip, each dilating element having a cross-sectional dimension greater than the cross-sectional dimension of the distal end of the cannula and greater than the cross-sectional dimension of the distal
10 tip, the cross-section sectional dimension of each dilating element being different from one another, each dilating element further comprising a mating lock adapted to mate with the locking mechanism on the cannula for removably positioning each dilating element on the cannula,

15 wherein different dilating elements may be mounted one at a time on the cannula for dissecting tissue and therefore forming cavities of differing dimensions.

44. (New) The tissue dissector of claim 43, wherein the locking mechanism comprises a length of screw threads positioned on an outer surface of the cannula, and the mating lock
20 comprises a threaded bore hole formed in each dilating element for engaging the length of screw threads.

45. (New) The tissue dissector of claim 43, wherein the locking mechanism comprises at least one protruberance positioned on an outer surface of the cannula, and the mating lock
25 comprises a mating slot formed in each dilating element for engaging the protruberance.

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46. (New) The tissue dissector of claim 43, further including an endoscope sized to fit within a lumen of the cannula, wherein the distal tip is transparent to allow tissue being dissected to be visualized with the endoscope through the distal tip.

5 47. (New) The tissue dissector of claim 43, further including a spacer length of cannula of between 14-28 mm disposed between a distal end of each mounted dilating element and a proximal end of the distal tip.

10 48. (New) The tissue dissector of claim 43, wherein the cross-sectional dimension of each dilating element is at least two times larger than the cross-section sectional dimension of the distal end of the cannula.

15 49. (New) The tissue dissector of claim 48, wherein the cross-sectional dimension of each dilating element is between 15-30 mm.

50. (New) The tissue dissector of claim 43, wherein the exterior contour of each dilating element is an oval-shape.

20 51. (New) The tissue dissector of claim 43, wherein each dilating element is compressible.

52. (New) A tissue dissector, comprising:
an elongated cannula having a proximal end and a distal end;
a distal tip having tapered outer walls converging to a blunt end for dissecting
25 tissue, the tip being disposed on the distal end of the cannula to dissect tissue and facilitate passage of the cannula through tissue; and

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5 a solid dilating element of fixed outer dimension disposed on the cannula proximal to the distal tip, the dilating element having a smooth exterior contour to facilitate atraumatic expansion of tissue following dissection by the tapered distal tip, the dilating element having a cross-sectional dimension greater than the cross-sectional dimension of the distal end of the cannula and greater than the cross-sectional dimension of the distal tip.

10 53. (New) The tissue dissector of claim 52, wherein the dilating element is removably mounted on the cannula.

54. (New) The tissue dissector of claim 53, further including a length of screw threads positioned on an outer surface of the cannula proximal to the distal tip, and wherein the dilating element further comprises a threaded bore hole for engaging the length of screw threads and removably positioning the dilating element on the cannula.

15 55. (New) The tissue dissector of claim 53, further including at least one protruberance positioned on an outer surface of the cannula proximal to the distal tip, and wherein the dilating element further comprises a mating slot for engaging the protruberance and removably positioning the dilating element on the cannula.

20 56. (New) The tissue dissector of claim 52, further including an endoscope sized to fit within a lumen of the cannula, wherein the distal tip is transparent to allow tissue being dissected to be visualized with the endoscope through the distal tip.

25 57. (New) The tissue dissector of claim 52, further including a spacer length of cannula of between 14-28 mm disposed between a distal end of the dilating element and a proximal end of the distal tip.

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58. (New) The tissue dissector of claim 52, wherein the cross-sectional dimension of the dilating element is at least two times larger than the cross-section sectional dimension of the distal end of the cannula.

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59. (New) The tissue dissector of claim 58, wherein the cross-sectional dimension of the dilating element is between 15-30 mm.

60. (New) The tissue dissector of claim 52, wherein the exterior contour of the dilating element is an oval-shape.

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61. (New) The tissue dissector of claim 52, wherein the distal tip and dilating element are formed as a single unit removably mounted on the cannula.

62. (New) The tissue dissector of claim 61, further including an endoscope sized to fit within a lumen of the cannula, wherein the distal tip is transparent to allow tissue being dissected to be visualized with the endoscope through the distal tip.

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63. (New) A tissue dissector, comprising:

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an elongated cannula having a proximal end and a distal end; and
a dilating unit removably mounted on the cannula distal end, including:

a distal tip having tapered outer walls converging to a blunt end for dissecting tissue, the tip being disposed on the distal end of the dilating unit to dissect tissue and facilitate passage of the cannula through tissue; and

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a dilating element having a cross-sectional dimension greater than the cross-sectional dimension of the distal end of the cannula and greater than the cross-sectional dimension of the distal tip, the dilating element being located proximally

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with respect to the distal tip to facilitate expansion of tissue following dissection by the tapered distal tip.

64. (New) The tissue dissector of claim 63, further including a length of screw threads positioned on an outer surface of the cannula near the distal end thereof, and wherein the dilating unit further comprises a threaded bore hole for engaging the length of screw threads and mounting the dilating unit on the distal end of the cannula.

65. (New) The tissue dissector of claim 63, further including at least one protruberance positioned on an outer surface of the cannula near the distal end thereof, and wherein the dilating unit further comprises a mating slot for engaging the protruberance and mounting the dilating unit on the distal end of the cannula.

66. (New) The tissue dissector of claim 63, further including an endoscope sized to fit within a lumen of the cannula, wherein the distal tip is transparent to allow tissue being dissected to be visualized with the endoscope through the distal tip.

67. (New) The tissue dissector of claim 63, further including a spacer length of the dilating unit of between 14-28 mm disposed between a distal end of the dilating element and a proximal end of the distal tip.

68. (New) The tissue dissector of claim 63, wherein the cross-sectional dimension of the dilating element is at least two times larger than the cross-section sectional dimension of the distal tip.

69. (New) The tissue dissector of claim 68, wherein the cross-sectional dimension of the dilating element is between 15-30 mm.

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70. (New) The tissue dissector of claim 63, wherein the exterior contour of the dilating element is an oval-shape.

5 71. (New) The tissue dissector of claim 63, wherein the dilating element is compressible.